

Message

From: Biggio, Patricia [biggio.patricia@epa.gov]
Sent: 8/17/2021 7:54:31 PM
To: Friedman, Dana [Friedman.Dana@epa.gov]; Perron, Monique [Perron.Monique@epa.gov]; Cyran, Carissa [Cyran.Carissa@epa.gov]; Wilbur, Donald [Wilbur.Donald@epa.gov]; Pyne, Jaclyn [Pyne.Jaclyn@epa.gov]; Feitel, Alexandra [feitel.alexandra@epa.gov]; Akerman, Gregory [Akerman.Gregory@epa.gov]; Kiely, Timothy [Kiely.Timothy@epa.gov]; Metzger, Michael [Metzger.Michael@epa.gov]; Vogel, Dana [Vogel.Dana@epa.gov]; Reaves, Elissa [Reaves.Elissa@epa.gov]
Subject: RE: FOR PRD and HED REVIEW: Follow-up on chlorpyrifos interviews; DDL: 2:30 p.m.

FIFRA SAPs 2012 – present: <https://www.epa.gov/sap/fifra-scientific-advisory-panel-meetings>
FIFRA Historical Meetings (pre-2012): <https://www.epa.gov/sap/fifra-scientific-advisory-panel-historical-meetings>

From: Friedman, Dana <Friedman.Dana@epa.gov>
Sent: Tuesday, August 17, 2021 3:38 PM
To: Perron, Monique <Perron.Monique@epa.gov>; Cyran, Carissa <Cyran.Carissa@epa.gov>; Wilbur, Donald <Wilbur.Donald@epa.gov>; Pyne, Jaclyn <Pyne.Jaclyn@epa.gov>; Feitel, Alexandra <feitel.alexandra@epa.gov>; Biggio, Patricia <biggio.patricia@epa.gov>; Akerman, Gregory <Akerman.Gregory@epa.gov>; Kiely, Timothy <Kiely.Timothy@epa.gov>; Metzger, Michael <Metzger.Michael@epa.gov>; Vogel, Dana <Vogel.Dana@epa.gov>; Reaves, Elissa <Reaves.Elissa@epa.gov>
Subject: RE: FOR PRD and HED REVIEW: Follow-up on chlorpyrifos interviews; DDL: 2:30 p.m.

You could also note that for other SAPs related to chlorpyrifos or EPA's use of epi studies, please refer to (and then cite the SAP website) for them to look. (I'm also remembering the 2010 use of epi SAP....)

From: Perron, Monique <Perron.Monique@epa.gov>
Sent: Tuesday, August 17, 2021 3:34 PM
To: Cyran, Carissa <Cyran.Carissa@epa.gov>; Wilbur, Donald <Wilbur.Donald@epa.gov>; Friedman, Dana <Friedman.Dana@epa.gov>; Pyne, Jaclyn <Pyne.Jaclyn@epa.gov>; Feitel, Alexandra <feitel.alexandra@epa.gov>; Biggio, Patricia <biggio.patricia@epa.gov>; Akerman, Gregory <Akerman.Gregory@epa.gov>; Kiely, Timothy <Kiely.Timothy@epa.gov>; Metzger, Michael <Metzger.Michael@epa.gov>; Vogel, Dana <Vogel.Dana@epa.gov>; Reaves, Elissa <Reaves.Elissa@epa.gov>
Subject: RE: FOR PRD and HED REVIEW: Follow-up on chlorpyrifos interviews; DDL: 2:30 p.m.

Ex. 5 Deliberative Process (DP)

Monique Perron
U.S. Environmental Protection Agency
Office of Pesticide Programs | Health Effects Division
Senior Science Advisor
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From: Cyran, Carissa <Cyran.Carissa@epa.gov>
Sent: Tuesday, August 17, 2021 3:32 PM

To: Perron, Monique <Perron.Monique@epa.gov>; Wilbur, Donald <Wilbur.Donald@epa.gov>; Friedman, Dana <Friedman.Dana@epa.gov>; Pyne, Jaclyn <Pyne.Jaclyn@epa.gov>; Feitel, Alexandra <feitel.alexandra@epa.gov>; Biggio, Patricia <biggio.patricia@epa.gov>; Akerman, Gregory <Akerman.Gregory@epa.gov>; Kiely, Timothy <Kiely.Timothy@epa.gov>; Metzger, Michael <Metzger.Michael@epa.gov>; Vogel, Dana <Vogel.Dana@epa.gov>; Reaves, Elissa <Reaves.Elissa@epa.gov>
Subject: Re: FOR PRD and HED REVIEW: Follow-up on chlorpyrifos interviews; DDL: 2:30 p.m.

Thank you, Monique and Alex!

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

From: Perron, Monique <Perron.Monique@epa.gov>

Sent: Tuesday, August 17, 2021 3:30 PM

To: Wilbur, Donald <Wilbur.Donald@epa.gov>; Cyran, Carissa <Cyran.Carissa@epa.gov>; Friedman, Dana <Friedman.Dana@epa.gov>; Pyne, Jaclyn <Pyne.Jaclyn@epa.gov>; Feitel, Alexandra <feitel.alexandra@epa.gov>; Biggio, Patricia <biggio.patricia@epa.gov>; Akerman, Gregory <Akerman.Gregory@epa.gov>; Kiely, Timothy <Kiely.Timothy@epa.gov>; Metzger, Michael <Metzger.Michael@epa.gov>; Vogel, Dana <Vogel.Dana@epa.gov>; Reaves, Elissa <Reaves.Elissa@epa.gov>

Subject: RE: FOR PRD and HED REVIEW: Follow-up on chlorpyrifos interviews; DDL: 2:30 p.m.

Carissa,

Given the timeline, I've put together the following responses with links as resources. For the SAP question which SAP are they talking about? We can only provide them with links to the reports since they are not giving us any context. I believe PRD is planning to send you the info for the 2016 SAP to add to the info you have below for the 2020 SAP. If there are others you think they will need, please let us know.

Thanks,
Monique

List of studies that show neurodevelopmental effects and brief description

The studies demonstrating evidence of neurodevelopmental effects are summarized and discussed in EPA's document entitled '*Updated Literature Review on Neurodevelopmental Effects & FQPA Safety Factor Determination for the Organophosphate Pesticides*', which can be found at <https://www.regulations.gov/document/EPA-HQ-OPP-2010-0119-0060>

List of key studies related to enzyme inhibition and acetylcholinesterase

The database for chlorpyrifos comprises numerous studies evaluating inhibition of the enzyme acetylcholinesterase, which is a well-established mode of action (MOA) for organophosphate compounds that leads to overstimulation of the nervous system. Studies in laboratory animals spans multiple routes of exposure, animal species, lifestages, and durations. The animal studies have been summarized in numerous chlorpyrifos risk assessments, including the 2011 Preliminary Human Health Risk Assessment drafted for Registration Review (<https://www.regulations.gov/document?D=EPA-HQ-OPP-2008-0850-0025>). Additionally, acetylcholinesterase inhibition data have been generated for the development of the chlorpyrifos physiologically-based, pharmacokinetic-pharmacodynamic (PBPK-PD) model, which has been utilized in recent chlorpyrifos risk assessments for Registration Review (<https://www.regulations.gov/document?D=EPA-HQ-OPP-2008-0850-0195>). These documents provide critical studies that have been as the basis for the Agency's risk assessments.

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**From:** Wilbur, Donald <[Wilbur.Donald@epa.gov](mailto:Wilbur.Donald@epa.gov)>  
**Sent:** Tuesday, August 17, 2021 2:12 PM  
**To:** Cyran, Carissa <[Cyran.Carissa@epa.gov](mailto:Cyran.Carissa@epa.gov)>; Friedman, Dana <[Friedman.Dana@epa.gov](mailto:Friedman.Dana@epa.gov)>; Pyne, Jaclyn <[Pyne.Jaclyn@epa.gov](mailto:Pyne.Jaclyn@epa.gov)>; Feitel, Alexandra <[feitel.alexandra@epa.gov](mailto:feitel.alexandra@epa.gov)>; Biggio, Patricia <[biggio.patricia@epa.gov](mailto:biggio.patricia@epa.gov)>; Perron, Monique <[Perron.Monique@epa.gov](mailto:Perron.Monique@epa.gov)>; Akerman, Gregory <[Akerman.Gregory@epa.gov](mailto:Akerman.Gregory@epa.gov)>; Kiely, Timothy <[Kiely.Timothy@epa.gov](mailto:Kiely.Timothy@epa.gov)>; Metzger, Michael <[Metzger.Michael@epa.gov](mailto:Metzger.Michael@epa.gov)>; Vogel, Dana <[Vogel.Dana@epa.gov](mailto:Vogel.Dana@epa.gov)>; Reaves, Elissa <[Reaves.Elissa@epa.gov](mailto:Reaves.Elissa@epa.gov)>  
**Subject:** RE: FOR PRD and HED REVIEW: Follow-up on chlorpyrifos interviews; DDL: 2:30 p.m.

These questions are rather broad and the timeline is unrealistic. Monique will try to pull together something quickly, but it will likely be just pointing at the FQPA white paper and studies used in the risk assessments.

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Health Effects Division  
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**From:** Cyran, Carissa <[Cyran.Carissa@epa.gov](mailto:Cyran.Carissa@epa.gov)>  
**Sent:** Tuesday, August 17, 2021 1:56 PM  
**To:** Friedman, Dana <[Friedman.Dana@epa.gov](mailto:Friedman.Dana@epa.gov)>; Pyne, Jaclyn <[Pyne.Jaclyn@epa.gov](mailto:Pyne.Jaclyn@epa.gov)>; Feitel, Alexandra <[feitel.alexandra@epa.gov](mailto:feitel.alexandra@epa.gov)>; Biggio, Patricia <[biggio.patricia@epa.gov](mailto:biggio.patricia@epa.gov)>; Perron, Monique <[Perron.Monique@epa.gov](mailto:Perron.Monique@epa.gov)>; Wilbur, Donald <[Wilbur.Donald@epa.gov](mailto:Wilbur.Donald@epa.gov)>; Akerman, Gregory <[Akerman.Gregory@epa.gov](mailto:Akerman.Gregory@epa.gov)>; Kiely, Timothy <[Kiely.Timothy@epa.gov](mailto:Kiely.Timothy@epa.gov)>  
**Subject:** FOR PRD and HED REVIEW: Follow-up on chlorpyrifos interviews; DDL: 2:30 p.m.  
**Importance:** High

Hello,

OPA has received a few follow-up questions from Michal's interviews this morning. I have a response to the 1st and 3rd question for your review, however, HED can provide the list of specific studies for questions 2 and 4?

**Can you please provide the additional language by 2:30 p.m. today?** I apologize for the quick turnaround. OPA is looking for a response today. Thank you!

**QUESTIONS/RESPONSES:**  
~~Re: registration timeline~~

# Ex. 5 Deliberative Process (DP)

# Ex. 5 Deliberative Process (DP)

List of studies that show neurodevelopmental effects and brief description

# Ex. 5 Deliberative Process (DP)

List of key studies related to enzyme inhibition and acetylcholinesterase (sp)

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**From:** Dunton, Cheryl <[Dunton.Cheryl@epa.gov](mailto:Dunton.Cheryl@epa.gov)>

**Sent:** Tuesday, August 17, 2021 12:41 PM

**To:** Ozmen, Shamus <[Ozmen.Shamus@epa.gov](mailto:Ozmen.Shamus@epa.gov)>; Cyran, Carissa <[Cyran.Carissa@epa.gov](mailto:Cyran.Carissa@epa.gov)>

**Cc:** Scheifele, Hans <[Scheifele.Hans@epa.gov](mailto:Scheifele.Hans@epa.gov)>

**Subject:** Follow-up on chlorpyrifos interviews

Shamus and Carissa - I need info on the following four points to get back to a reporter today on chlorpyrifos. Can you work with the team to get this info? Is today doable?

-----Original Message-----

From: Hamilton, Lindsay <[Hamilton.Lindsay@epa.gov](mailto:Hamilton.Lindsay@epa.gov)>

Sent: Tuesday, August 17, 2021 12:38 PM

To: Dunton, Cheryl <[Dunton.Cheryl@epa.gov](mailto:Dunton.Cheryl@epa.gov)>

Subject: FW: For Dino

Cheryl,

Can you help gather some of this for us to share with Dino?

Let me know if you need to talk it through or if you need any clarity on any of this.

Thanks,  
Lindsay

Michal's notes:

Re—registration timeline

List of studies that show neurodevelopmental effects and brief description

Quotes from FIFRA SAP - I think some of that is in the rule itself

List of key studies related to enzyme inhibition and acetylcholinesterase (sp)